

## **ABSTRACT**

An equal gain composite beamforming technique which constrains that the power of the signal output by each antenna is the same, and is equal to the total power of the transmit signal divided by the number  $N$  of transmit antennas from which the signal is to be transmitted. By reducing output power requirements for each power amplifier, the silicon area of the power amplifiers are reduced by as much as  $N$  times (where  $N$  is equal to the number of transmit antennas) relative to a non-equal gain CBF.